

Amendment
Application No. 10/827,292
Attorney Docket No. 970607C

REMARKS

Claims 23-29, 31, 32, 38 and 42-51 are pending. Claim 30 is hereby canceled and claims 23, 31, 43, 45, 46 and 51 are amended.

Claims 23, 26, 30, 43 and 45-48 were rejected under 35 U.S.C. §103(a) as being obvious over Hayashide and Mu et al. Favorable reconsideration of this rejection is respectfully requested.

Claim 23 has been amended to incorporate the features of claim 30. The combination of Hayashide and Mu et al. fails to teach or suggest all the features of amended claim 23.

Amended claim 23 requires a fourth insulating film made of a silicon nitride film and formed to cover said first conductive layer, wherein said fourth insulating film is thicker than said second insulating film. The silicon nitride layer 34 (see Figs. 6A and 18B) is incorporated into the silicon nitride layer 36 which covers the first conductive layer 32, 33 as illustrated in Fig. 19. As described from page 43, line 20 through page 44, line 16, it is preferable that the silicon nitride film 34 constituting the silicon nitride film region 36 is set thicker than the second insulating film of silicon nitride since at the same time when the silicon nitride film 51 is etched, the silicon nitride film region 36 of the wiring layer in the peripheral circuit is etched.

Independent claims 43 and 45 were included in the rejection. These claims read on the structures illustrated in Figs. 32 and 31. It should be noted that although the same terms of "first" and "second" insulating films are used in these claims and in claim 23, their contents are very different. That is, claims 43 and 45 require first insulating films each covering one of the first conductive layers, whereas in claim 23 there is only one first insulating film. Furthermore, the

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second insulating film of claims 43 and 45 has a surface which is coplanar with at least one of the first insulating films, whereas claim 23 requires that the second insulating film is formed on the first insulating film and cannot have a coplanar surface with the first insulating film. The Office Action does not state which elements of Hayashide and Mu et al. would be considered to correspond to the first and second insulating films of claims 43 and 45. The Examiner is requested to point out which, if any, element would correspond to the features claimed in claims 43 and 45.

Claims 24, 25, 27-29, 31, 32, 44 and 49-51 were rejected under 35 U.S.C. §103(a) as obvious over Hayashide and Mu et al. in further view of Auer et al. Favorable reconsideration of this rejection is respectfully requested.

Auer et al. discloses a cap-shaped capacitor with a vertical cylindrical portion. However, Auer et al. fails to teach or suggest a SiN layer formed to cover the first conductive layer. Accordingly, even a combination of the claimed references fails to teach or suggest the features of the claims.

Claim 31 has been amended to further clarify that the vertical cylindrical portion of the capacitor has an inside portion higher than the outside portion. That is, claim 31 has been amended to specify that a height of the third conductive layer on an inner side of the cylindrical portion is larger than a height of the third conductive layer on an outer side of the cylindrical portion. The third and second insulating films can give physical support to the second conductive layer (storage electrode). Such is not disclosed or suggested by Auer et al. The cylindrical portion of the capacitor has an outside portion which is higher than the inside portion, which teaches away from the structure specified in amended claim 31.

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In regard to claims 44 and 49 which are included in the rejection, the Examiner is requested to highlight which elements of the cited art are considered to correspond to the claimed elements. As noted above, no explanation of the elements of independent claims 43 and 45 was set forth in the Office Action.

In regard to claims 50 and 51, these claims define different source and drain structures. Claims 50 and 51 define a different structure of the source and drain, not merely setting forth the concentration of the source/drain regions. The source/drain regions are usually formed by the same doping step, which would result in the same concentration. It is not common to use different source and drain structures. Accordingly, the cited art fails to teach or suggest the features of these claims.

Claims 38 and 42 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2 and 7 of U.S. Patent No. 6,344,692. A terminal disclaimer is submitted herewith to overcome this rejection.

For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

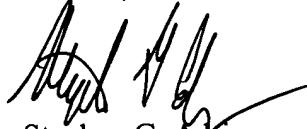
Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned attorney.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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Attachments: Petition for Extension of Time
Submission of Terminal Disclaimer with
Terminal Disclaimer